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A LIST OF BIRDS OBSERVED AT ASHLAND, VIRGINIA.

BY G. C. EMBODY,

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THE town of Ashland is situated near the center of Hanover County, about ninety-nine miles south of Washington and seventeen miles north of Richmond. The region occupies a position intermediate between the typical piedmont plateau and the coastal plain, the former occurring three miles to the west, the latter a somewhat greater distance to the east.

From Ashland to the southward the drainage is into the Chickahominy River; to the northward, into the South Anna and Pamunkey Rivers, the former river tributary to the latter. The range in altitude for the whole area is approximately from two hundred to two hundred and forty feet above sea-level. The region is poorly drained and in many places standing water occurs at varying depths from two to six feet below the surface. Much land is unfit for cultivation because of this excessive amount of water. In such fields tangles of weeds and briars prevail with scattered patches of sedge, berry bushes and sassafras, all of which furnish food or shelter for such winter residents as Song, Field, and Tree Sparrows, Juncos, Cardinals, and Carolina Wrens; and later, nesting sites for Cardinals, Indigo Buntings, Prairie Warblers, Chats, White-eyed Vireos, Catbirds, and Brown Thrashers.

The woods, which cover a rather large area, may be conveniently grouped under three types; the high, dry oak wood, the sandy, rather moist pine, and the low moist, sometimes swampy wood in which predominate the tulip-tree (*Liriodendron tulipifera*), sweet gum and elm (*Ulmus americana*). The pine type seems to occupy the greatest area and consists almost entirely of trees less than eight inches in diameter. The sweet gum-elm type ranks second in extent, while the dry oak woods occur in scattered places on the well drained hills. The sweet gum-elm woods seem to be the richest in bird life, during migrations as well as during the breeding season.

There are two bodies of water, Railroad Pond, two miles to the

north, and King's Pond, three miles or less to the west. These are not sufficiently large nor do they furnish the necessary conditions for attracting or supporting more than an occasional duck or shore-bird. This in a large measure accounts for the absence of such birds from the list. The single duck which came to my notice was in too great a hurry to be identified with certainty.

The climate is free from extremes of heat and cold. The range of temperature between normals for January and July averages 42° F. There are, however, conspicuous alternations of warm and cold spells in spring, which injure early blooming fruit trees, especially peaches, and which doubtless affect in no inconsiderable way the movements of migrating birds.

The region lies within the Carolinian Faunal Area but close to the isotherm marking the northern limit of the Austroriparian. This is indicated by the following comparison of the temperatures taken at Ashland in 1908, with those marking the northern limits of the Lower Austral and Carolinian respectively:—

Sum of mean daily temperature, above 43° F.

Ashland 1908	16212
Northern limit Austroriparian	18000 ¹
Northern limit Carolinian	11500 ¹

Mean temperature for the six hottest consecutive weeks.

Ashland 1908	77.1 F.
Northern limit Austroriparian	78.8 ¹
Northern limit Carolinian	71.6 ¹

From this condition of affairs a few lower austral forms might be expected to invade the region about Ashland, but aside from the Black Vulture and Mockingbird no typical ones were observed. One should be on the lookout for such forms as Chuck-will's-widow, Brown-headed Nuthatch, Southern Hairy Woodpecker, Red-cockaded Woodpecker, Blue Grosbeak, Swainson's Warbler and Prothonotary Warbler.

In the following list only those birds are mentioned which were observed by the writer within a radius of five miles of Ashland and during the period from September 10, 1907, until June 17, 1908.

¹ Merriam, *Life Zones and Crop Zones of the United States*, 1898, p. 55.

I am indebted to Mr. E. A. Evans, Director of the Richmond Experiment Station, for the climatological data here used. For more detailed information regarding the physiography, drainage, and soils the reader is referred to the 'Soil Survey of Hanover County, Virginia' by H. H. Bennett and W. E. McLendon, U. S. Department of Agriculture, 1906.

It is with the hope that someone may continue the work and furnish us with a reasonably complete catalogue of the birds of Hanover County, that this preliminary affair is put forth.

Annotated List.

1. **Podilymbus podiceps**. PIED-BILLED GREBE.—Occurs in open waters from about November 20 until April 9. Occasional pairs were seen on Railroad and King's Ponds.

2. **Botaurus lentiginosus**. BITTERN.—A rare winter visitant seen but once, November 2, 1907.

3. **Butorides virescens**. LITTLE GREEN HERON.—A summer resident, not common. One or more may usually be found at King's Pond or in the swamp two miles south of Ashland.

4. **Actitis macularia**. SPOTTED SANDPIPER.—Found in small numbers during April, May, June and September. It may breed but a nest has not yet been discovered.

5. **Oxyechus vociferus**. KILLDEER.—A few were seen during the latter part of March, during April and October. All were feeding in wet meadows or ploughed fields.

6. **Colinus virginianus**. BOB-WHITE.—A fairly abundant resident, more in evidence during the period of song, from the middle of April through the greater part of July.

7. **Meleagris gallopavo silvestris**. WILD TURKEY.—Turkeys still exist in some numbers in the more unsettled parts of Hanover County. One was brought in by a farmer who had killed several during the fall, five miles to the northwest of Ashland.

8. **Zenaidura macroura carolinensis**. MOURNING DOVE.—Rather common from March 15 until late in November. Occasionally seen in winter.

9. **Cathartes aura septentrionalis**. TURKEY VULTURE.—Common throughout the year. Breeds.

10. **Catharista urubu**. BLACK VULTURE.—The "Carrion Crow" seems to be nearly as abundant as the preceding species and may breed.

11. **Accipiter velox**. SHARP-SHINNED HAWK.—Recorded but twice during the period, October 20 and November 5, 1907.

12. **Accipiter cooperi**. COOPER'S HAWK.—One only was identified with certainty, January 16, 1908.

13. **Buteo lineatus.** RED-SHOULDERED HAWK.—Not uncommon as a summer resident. A nest with half-grown young found May 11, 1908. Occasionally seen in winter.

14. **Buteo platypterus.** BROAD-WINGED HAWK.—Apparently rare; one record only, March 15, 1908.

15. **Falco sparverius.** SPARROW HAWK.—Not uncommon during the fall migrations. Occasionally seen in winter, and in spring as late as April 28.

16. **Strix varia.** BARRED OWL.—Several observed at different times in a swamp about two miles south of Ashland. A young female just out of the nest was captured May 14, 1908. An adult male captured May 11, 1908, was smaller and considerably darker underneath than specimens from New York.

17. **Otus asio.** SCREECH OWL.—An uncommon resident. Breeds.

18. **Coccyzus americanus.** YELLOW-BILLED CUCKOO.—A tolerably common summer resident and breeder, arriving from the south about May first.

19. **Ceryle alcyon.** BELTED KINGFISHER.—A summer resident occurring in small numbers and restricted to the ponds and larger streams.

20. **Dryobates villosus.** HAIRY WOODPECKER.—A resident, apparently not common. A nest with young ready to leave was located in a dead burned pine, May 4, 1908.

21. **Dryobates pubescens medianus.** DOWNY WOODPECKER.—Rather common throughout the year. Breeds.

22. **Melanerpes erythrocephalus.** RED-HEADED WOODPECKER.—A few were seen in September and October, 1907. I cannot account for its absence or rareness in the late spring of 1908.

23. **Centurus carolinus.** RED-BELLIED WOODPECKER.—Very uncommon in spring, becoming common in late summer and fall.

24. **Colaptes auratus luteus.** FLICKER.—Common from May 15 until the middle of November. Rare in winter.

25. **Antrostomus vociferus.** WHIP-POOR-WILL.—A very common summer resident and breeder, arriving about the middle of April.

26. **Chordeiles virginianus.** NIGHTHAWK.—A rather common summer resident, becoming abundant during the September migrations.

27. **Chaetura pelagica.** CHIMNEY SWIFT.—Arrives about April 21, from which time it is abundant until October 1.

28. **Archilochus colubris.** RUBY-THROATED HUMMINGBIRD.—A common summer resident, arriving about May 4.

29. **Tyrannus tyrannus.** KINGBIRD.—Common from about April 28 until the latter part of September.

30. **Myiarchus crinitus.** CRESTED FLYCATCHER.—Arrives the latter part of April, from which time it is common in every wood of the sweet gum-elm type until the middle of September.

31. **Sayornis phoebe.** PHOEBE.—Not uncommon as a breeder. The earliest record for 1908 was March 2.

32. *Myiochanes virens*. WOOD PEWEE.— A very common summer resident and breeder, appearing about May 1 and departing the middle of September.

33. *Empidonax virescens*. ACADIAN FLYCATCHER.— Breeds rather commonly in the swamp south of Ashland. It arrives from the south the fore part of May.

34. *Empidonax minimus*. LEAST FLYCATCHER.— An apparently rare transient. Its characteristic call was heard but once, May 10, 1908.

35. *Cyanocitta cristata*. BLUE JAY.— Uncommon in summer. A few were seen during the winter of 1907-08.

36. *Corvus brachyrhynchos*. CROW.— Abundant at all times.

37. *Corvus ossifragus*. FISH CROW.— A fairly common resident.

38. *Molothrus ater*. COWBIRD.— Fairly common in spring but rather rare during the breeding season. The eggs were not observed.

39. *Agelaius phoeniceus*. RED-WINGED BLACKBIRD.— Arrives early in March, and is uncommon as a breeder. The absence of cat-tail marshes makes necessary the use of low bushes along streams for nesting places.

40. *Sturnella magna*. MEADOWLARK.— A resident, abundant from the middle of March until about November 20; fairly common during winter.

41. *Icterus spurius*. ORCHARD ORIOLE.— A rather common summer resident, arriving about May 5. Breeds.

42. *Icterus galbula*. BALTIMORE ORIOLE.— A transient, apparently uncommon. A few were seen on two occasions only, May 1 and 4, 1908.

43. *Euphagus carolinus*. RUSTY BLACKBIRD.— They appeared in large numbers March 15, 1908, but none were seen after March 18. This probably does not represent their true status.

44. *Quiscalus quiscula*. PURPLE GRACKLE.— An uncommon summer resident, arriving early in March.

45. *Passer domesticus*. ENGLISH SPARROW.— Abundant at all seasons.

46. *Carpodacus purpureus*. PURPLE FINCH.— Occurs in small flocks throughout the winter. Very common during April and the fore part of May; last seen May 11, 1908.

47. *Astragalinus tristis*. GOLDFINCH.— Common in flocks during the winter months. Abundant during April and May. Breeds.

48. *Spinus pinus*. PINE SISKIN.— Seven were seen with a flock of Goldfinches, January 16, 1908, two of which were collected.

49. *Poecetes gramineus*. VESPER SPARROW.— An uncommon migrant which remains for a few days only. Observed March 22 and 24, 1908.

50. *Passerculus sandwichensis savanna*. SAVANNAH SPARROW.— Only one individual observed, March 24, 1908.

51. *Ammodramus savannarum australis*. GRASSHOPPER SPARROW.— A common summer resident. Arrives early in April. Breeds.

52. *Passerherbulus henslowi*. HENSLOW'S SPARROW.— I saw but one specimen which was collected May 11, 1908.

53. **Zonotrichia leucophrys.** WHITE-CROWNED SPARROW.—An uncommon transient and rare winter visitant. May usually be found about March 15.

54. **Zonotrichia albicollis.** WHITE-THROATED SPARROW.—A common winter visitant, occurring as late as May 11, 1908. Abundant during April and November.

55. **Spizella monticola.** TREE SPARROW.—Occurs during the winter months but is not common.

56. **Spizella passerina.** CHIPPING SPARROW.—An abundant summer resident, arriving about March 15.

57. **Spizella pusilla.** FIELD SPARROW.—Occurs abundantly at all seasons of the year.

58. **Junco hyemalis.** SLATE-COLORED JUNCO.—A winter visitant, occurring in large numbers until about April 6.

59. **Melospiza melodia.** SONG SPARROW.—A very common winter visitant. None were seen later than April 6; however at Fredericksburg, fifty miles to the northward, I heard them singing as late as June 10.

60. **Melospiza georgiana.** SWAMP SPARROW.—Apparently very uncommon. Two were seen March 15, 1908.

61. **Passerella iliaca.** FOX SPARROW.—Common for a few days beginning about March 15. A few observed October 20, 1907.

62. **Pipilo erythrophthalmus.** TOWHEE.—A common summer resident of general distribution. Arrives early in March. A few remain during winter.

63. **Cardinalis cardinalis.** CARDINAL.—A common resident, more abundant in spring and summer.

64. **Zamelodia ludoviciana.** ROSE-BREASTED GROSBEAK.—A very uncommon transient. One seen on each of the following dates:—May 5, 10 and 11, 1908.

65. **Passerina cyanea.** INDIGO BUNTING.—An abundant summer resident, arriving about May 1.

66. **Piranga erythromelas.** SCARLET TANAGER.—An uncommon transient. It arrives about April 29.

67. **Piranga rubra.** SUMMER TANAGER.—A very common summer resident, arriving about April 28.

68. **Progne subis.** PURPLE MARTIN.—A fairly common resident, occurring from about April 16 until the fore part of September.

69. **Petrochelidon lunifrons.** CLIFF SWALLOW.—A number were seen in September, 1907. This species must be further investigated before any general statements can be given relative to its abundance and breeding.

70. **Hirundo erythrogaster.** BARN SWALLOW.—A common summer resident, appearing about April 28.

71. **Iridoprocne bicolor.** TREE SWALLOW.—A rather common transient; the first swallow to appear in spring, arriving about April 6 (1908), or perhaps a week earlier, depending upon the weather.

72. **Riparia riparia.** BANK SWALLOW.— Large numbers were seen throughout the month of September, 1907, but none came to my notice the following spring.

73. **Stelgidopteryx serripennis.** ROUGH-WINGED SWALLOW.— A fairly common summer resident, arriving about May 4.

74. **Bombycilla cedrorum.** CEDAR WAXWING.— Occurs irregularly throughout the year; not known to breed.

75. **Lanius ludovicianus migrans.** NORTHERN LOGGERHEAD SHRIKE.— An uncommon winter visitant, occurring from the middle of October until the first of April; not known to breed. Ashland specimens are darker than typical *migrans*.

76. **Vireosylva olivacea.** RED-EYED VIREO.— A very common summer resident and breeder, arriving about April 28.

77. **Lanivireo flavifrons.** YELLOW-THROATED VIREO.— Rather common during migrations, arriving the latter part of April. A few undoubtedly breed.

78. **Vireo griseus.** WHITE-EYED VIREO.— A fairly common summer resident and breeder, arriving about April 27.

79. **Mniotilta varia.** BLACK AND WHITE WARBLER.— Very common during migrations, arriving about April 6. A few remain to breed.

80. **Compsothlypis americana usneæ.** NORTHERN PARULA WARBLER. Common during migrations, arriving about April 25. Those specimens which came to hand were migrating birds and the northern form. A female was observed May 4, 1908, building a nest thirty feet up in a pine tree. This nest was abandoned a week later and before the female could be determined as to its subspecies.

81. **Dendroica æstiva.** YELLOW WARBLER.— A fairly common summer resident and breeder. It arrives from the south about April 15.

82. **Dendroica caerulescens.** BLACK-THROATED BLUE WARBLER.— A tolerably common transient, appearing late in April.

83. **Dendroica coronata.** MYRTLE WARBLER.— An uncommon transient, arriving the fore part of March. A few may winter.

84. **Dendroica pensylvanica.** CHESTNUT-SIDED WARBLER.— A tolerably common transient. It appears late in April and remains about two weeks.

85. **Dendroica striata.** BLACK-POLL WARBLER.— A fairly common transient from about May 2 until 17.

86. **Dendroica virens.** BLACK-THROATED GREEN WARBLER.— Occurs as a transient, apparently uncommon. A few were seen in late September, 1907, and one only was noted the following spring, May 11, 1908.

87. **Dendroica vigorsii.** PINE WARBLER.— Very common during migrations and tolerably common in summer. They arrive as early as March 2. A female was observed feeding its young, May 11, 1908.

88. **Dendroica discolor.** PRAIRIE WARBLER.— A common summer resident and breeder; arrives late in April.

89. **Seiurus aurocapillus.** OVENBIRD.— Very common from about May 1 to September 20. Breeds.

90. **Seiurus motacilla.** LOUISIANA WATER-THRUSH.— A very common summer resident, occurring in every wet wood and along the larger streams. It arrives about March 26.

91. **Oporornis formosa.** KENTUCKY WARBLER.— Common as a summer resident but restricted to the larger wet woods. It arrives early in May.

92. **Geothlypis trichas.** MARYLAND YELLOW-THROAT.— Very common from April 27 until the latter part of September.

93. **Icteria virens.** YELLOW-BREADED CHAT.— An abundant breeder. Arrives about April 28.

94. **Wilsonia citrina.** HOODED WARBLER.— A summer resident, common in all moist woods; first appears about April 28.

95. **Setophaga ruticilla.** REDSTART.— Arriving about April 24, it is abundant throughout the summer. Nest building was observed as early as April 28.

96. **Mimus polyglottos.** MOCKINGBIRD.— A resident, more common during spring and summer than in winter.

97. **Dumetella carolinensis.** CATBIRD.— An abundant breeder, arriving the third week in April.

98. **Toxostoma rufum.** BROWN THRASHER.— A summer resident and very common; arrives the last week in March.

99. **Thryothorus ludovicianus.** CAROLINA WREN.— A common resident, found in all sorts of habitats furnishing sufficient shelter.

100. **Troglodytes aëdon.** HOUSE WREN.— A very common breeder, arriving about April 11.

101. **Nannus hiemalis.** WINTER WREN.— Fairly common throughout the winter, leaving for the north during the first week in April.

102. **Certhia familiaris americana.** BROWN CREEPER.— Very common throughout the winter. It leaves for the north about March 26.

103. **Sitta carolinensis.** WHITE-BREADED NUTHATCH.— A resident, at no time very common. Breeds.

104. **Bæolophus bicolor.** TUFTED TITMOUSE.— A resident, fairly common in winter and abundant at other times.

105. **Penthestes carolinensis.** CAROLINA CHICKADEE.— A common and generally distributed resident.

106. **Regulus satrapa.** GOLDEN-CROWNED KINGLET.— A very common winter visitant, remaining until about April 6.

107. **Regulus calendula.** RUBY-CROWNED KINGLET.— Fairly common during the month of March; not observed during the winter of 1907-08.

108. **Polioptila cærulea.** BLUE-GRAY GNATCATCHER.— Arrives about April 10 and breeds commonly in woods of the dry oak type.

109. **Hylocichla mustelina.** WOOD THRUSH.— An abundant breeder, arriving about April 28.

110. **Hylocichla fuscescens.** VEERY; WILSON'S THRUSH.— A transient of which but three individuals were seen, April 11.

111. **Hylocichla ustulata swainsoni.** OLIVE-BACKED THRUSH.— A transient, apparently uncommon; observed May 11 and 17, 1908.

112. **Hylocichla guttata pallasi.** HERMIT THRUSH.—An uncommon transient, arriving as early as March 2. A few may winter.

113. **Planesticus migratorius.** ROBIN.—A common summer resident occasionally wintering in some numbers. They appear in large flocks about the middle of February.

114. **Sialia sialis.** BLUEBIRD.—A common resident, more abundant in March than at other times.

THE COURTSHIPS OF GOLDEN-EYE AND EIDER DUCKS.¹

BY CHARLES W. TOWNSEND, M. D.

THE intelligence shown by Golden-eyes or Whistlers (*Clangula clangula americana*) in frequenting bodies of water in or near the heart of cities where they are safe from persecution, renders easy a study of their habits, yet very little has been published on the somewhat remarkable courtship performances of this bird. I have watched these courtships at Ipswich and once at Barnstable, Massachusetts, but my most intimate studies have been made in the Back-bay Basin of the Charles River between Boston and Cambridge.

The spring is of course the time when courtship actions are most indulged in, and they begin on mild days in February and continue until the departure of the birds for the North in April. In the autumn months, however, it is not uncommon to see the same performance given by both the adult and young males, although but incompletely carried out in the latter case.

The courtship action varies considerably, but a typical and complete one may be described as follows: One or more males swim restlessly back and forth and around a female. The feathers of the cheeks and crest of the male are so erected that the head looks large and round, the neck correspondingly small. As he swims along the head is thrust out in front close to the water,

¹ Read at a Meeting of the Nuttall Ornithological Club, Cambridge, Mass., March 7, 1910.